SEQUENCE LISTING

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<120>   COMPOSITIONS AND METHODS FOR MODIFICATION AND PREVENTION OF SARS
         CORONAVIRUS INFECTIVITY

<130>   6-04 WO

<140>   PCT (not assigned)
<141>   2005-02-14

<150>   US 60/544,410
<151>   2004-02-12

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                        Page 9

Glu Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys
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Ala Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser
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Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1               5               10              15

ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att        96
Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
                20              25              30

agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag       144
Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
            35              40              45

ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt       192
Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
        50              55              60

aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat       240
Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
65              70              75              80

atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac agg       288
Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg
                85              90              95

tta att aca ggc aga ctt caa agc ctt caa acc tat gta aca caa caa       336
Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln
            100             105             110

cta atc agg gct gct gaa atc agg gct tct gct aat ctt gct gct act       384
Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr
        115             120             125

aaa atg                                                               390
Lys Met
        130
```

<210> 4
<211> 130
<212> PRT
<213> SARS coronavirus Urbani

<400> 4

```
Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1               5               10              15

Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
                20              25              30

Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
            35              40              45

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
        50              55              60

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
65              70              75              80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg
                85              90              95
```

```
Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln
          100                 105                 110

Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr
          115                 120                 125

Lys Met
    130


<210>   5
<211>   276
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(276)

<400>   5
atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt      48
Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1                 5                   10                  15

ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att      96
Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
                  20                  25                  30

agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag     144
Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
          35                  40                  45

ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt     192
Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
      50                  55                  60

aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat     240
Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
65                  70                  75                  80

atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta                     276
Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
              85                  90


<210>   6
<211>   92
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   6

Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1                 5                   10                  15


Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
                  20                  25                  30


Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
          35                  40                  45


Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
      50                  55                  60
```

```
Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp
65              70              75              80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
             85              90
```

```
<210>  7
<211>  174
<212>  DNA
<213>  SARS coronavirus Urbani


<220>
<221>  CDS
<222>  (1)..(174)

<400>  7
att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa      48
Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1               5               10              15

gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa      96
Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
            20              25              30

ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc ctt     144
Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu
        35              40              45

tcg cga ctt gat aaa gtc gag gcg gag gta                             174
Ser Arg Leu Asp Lys Val Glu Ala Glu Val
    50              55
```

```
<210>  8
<211>  58
<212>  PRT
<213>  SARS coronavirus Urbani

<400>  8

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1               5               10              15


Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
            20              25              30


Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu
        35              40              45


Ser Arg Leu Asp Lys Val Glu Ala Glu Val
    50              55


<210>  9
<211>  141
<212>  DNA
<213>  SARS coronavirus Urbani


<220>
<221>  CDS
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<222> (1)..(141)

<400> 9
```
ttg ggc aag ctg caa gac gtt gtt aac cag aat gct caa gca tta aac    48
Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn
1               5                   10                  15

aca ctt gtt aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg    96
Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val
                20                  25                  30

cta aat gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta       141
Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
        35                  40                  45
```

<210> 10
<211> 47
<212> PRT
<213> SARS coronavirus Urbani

<400> 10

```
Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn
1               5                   10                  15


Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val
                20                  25                  30


Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val
        35                  40                  45
```

<210> 11
<211> 114
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(114)

<400> 11
```
caa att gac agg tta att aca ggc aga ctt caa agc ctt caa acc tat    48
Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr
1               5                   10                  15

gta aca caa caa cta atc agg gct gct gaa atc agg gct tct gct aat    96
Val Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn
                20                  25                  30

ctt gct gct act aaa atg                                            114
Leu Ala Ala Thr Lys Met
            35
```

<210> 12
<211> 38
<212> PRT
<213> SARS coronavirus Urbani

<400> 12

```
Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr
1               5                   10                  15
```

```
Val Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn
            20                  25                  30

Leu Ala Ala Thr Lys Met
            35


<210>   13
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   13
atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt       48
Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1                   5                   10                  15

ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att       96
Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
            20                  25                  30

agt caa att                                                          105
Ser Gln Ile
            35


<210>   14
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   14

Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val
1                   5                   10                  15


Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile
            20                  25                  30


Ser Gln Ile
            35


<210>   15
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   15
ttc aat ggc att gga gtt acc caa aat gtt ctc tat gag aac caa aaa       48
Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys
1                   5                   10                  15

caa atc gcc aac caa ttt aac aag gcg att agt caa att caa gaa tca       96
Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser
```
Page 15

```
ctt aca aca                                                              105
Leu Thr Thr
        35
```

```
<210>   16
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   16

Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys
1               5               10              15


Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser
            20              25              30


Leu Thr Thr
        35
```

```
<210>   17
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   17
caa aat gtt ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac      48
Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn
1               5               10              15

aag gcg att agt caa att caa gaa tca ctt aca aca aca tca act gca      96
Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala
            20              25              30

ttg ggc aag                                                          105
Leu Gly Lys
        35
```

```
<210>   18
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   18

Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn
1               5               10              15


Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala
            20              25              30


Leu Gly Lys
        35
```

<210> 19
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 19
caa aaa caa atc gcc aac caa ttt aac aag gcg att agt caa att caa   48
Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln
1   5   10   15

gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa gac gtt   96
Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val
            20   25   30

gtt aac cag   105
Val Asn Gln
        35

<210> 20
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 20

Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln
1   5   10   15

Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val
            20   25   30

Val Asn Gln
        35

<210> 21
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 21
ttt aac aag gcg att agt caa att caa gaa tca ctt aca aca aca tca   48
Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser
1   5   10   15

act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct caa gca   96
Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala
            20   25   30

tta aac aca   105
Leu Asn Thr
        35

<210> 22
<211> 35

<212> PRT
<213> SARS coronavirus Urbani

<400> 22

Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser
1   5   10   15

Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala
            20   25   30

Leu Asn Thr
        35

<210> 23
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 23
att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa   48
Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa   96
Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
            20   25   30

ctt agc tct   105
Leu Ser Ser
        35

<210> 24
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 24

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
            20   25   30

Leu Ser Ser
        35

<210> 25
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 25
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aca tca act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct        48
Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
1               5                   10                  15

caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt gca        96
Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala
                20                  25                  30

att tca agt                                                           105
Ile Ser Ser
        35
```

<210> 26
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 26

```
Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
1               5                   10                  15


Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala
                20                  25                  30


Ile Ser Ser
        35
```

<210> 27
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 27
```
caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa        48
Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys
1               5                   10                  15

caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc        96
Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile
                20                  25                  30

ctt tcg cga                                                           105
Leu Ser Arg
        35
```

<210> 28
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 28

```
Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys
1               5                   10                  15
```

```
Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile
            20              25              30

Leu Ser Arg
        35


<210>   29
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   29
gct caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt      48
Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly
1               5               10              15

gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat aaa gtc      96
Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val
            20              25              30

gag gcg gag                                                          105
Glu Ala Glu
        35


<210>   30
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   30

Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly
1               5               10              15


Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val
            20              25              30


Glu Ala Glu
        35


<210>   31
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   31
gtt aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat      48
Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
1               5               10              15


gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac      96
Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
            20              25              30
```

```
agg tta att                                                                105
Arg Leu Ile
        35


<210>   32
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   32

Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
1               5                   10                  15


Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
            20                  25                  30


Arg Leu Ile
        35


<210>   33
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400>   33
ttt ggt gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat      48
Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp
1               5                   10                  15


aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc aga ctt      96
Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu
            20                  25                  30

caa agc ctt                                                          105
Gln Ser Leu
        35


<210>   34
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   34

Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp
1               5                   10                  15


Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu
            20                  25                  30


Gln Ser Leu
        35


<210>   35
```

<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 35
```
cta aat gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa        48
Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln
1               5                   10                  15

att gac agg tta att aca ggc aga ctt caa agc ctt caa acc tat gta        96
Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val
                20                  25                  30

aca caa caa                                                            105
Thr Gln Gln
        35
```


<210> 36
<211> 35
<212> PRT
<213> SARS coronavirus Urbani

<400> 36

```
Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln
1               5                   10                  15


Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val
                20                  25                  30


Thr Gln Gln
        35
```


<210> 37
<211> 105
<212> DNA
<213> SARS coronavirus Urbani

<220>
<221> CDS
<222> (1)..(105)

<400> 37
```
ctt gat aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc        48
Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly
1               5                   10                  15

aga ctt caa agc ctt caa acc tat gta aca caa caa cta atc agg gct        96
Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala
                20                  25                  30

gct gaa atc                                                            105
Ala Glu Ile
        35
```


<210> 38
<211> 35
<212> PRT
```

<213>    SARS coronavirus Urbani

<400>    38

Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly
1               5                   10                  15

Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala
            20                  25                  30

Ala Glu Ile
        35


<210>    39
<211>    123
<212>    DNA
<213>    SARS coronavirus Urbani


<220>
<221>    CDS
<222>    (1)..(123)

<400>    39
gat gtt gat ctt ggc gac att tca ggc att aac gct tct gtc gtc aac          48
Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn
1               5                   10                  15

att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa aat tta aat          96
Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn
            20                  25                  30

gaa tca ctc att gac ctt caa gaa ttg                                      123
Glu Ser Leu Ile Asp Leu Gln Glu Leu
        35                  40


<210>    40
<211>    41
<212>    PRT
<213>    SARS coronavirus Urbani

<400>    40

Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn
1               5                   10                  15

Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn
            20                  25                  30

Glu Ser Leu Ile Asp Leu Gln Glu Leu
        35                  40


<210>    41
<211>    63
<212>    DNA
<213>    SARS coronavirus Urbani


<220>
<221>    CDS
<222>    (1)..(63)

<400> 41
att gac Cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att     48
Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile
1               5                   10                  15

gac ctt caa gaa ttg                                                 63
Asp Leu Gln Glu Leu
            20


<210>   42
<211>   21
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   42

Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile
1               5                   10                  15


Asp Leu Gln Glu Leu
            20


<210>   43
<211>   84
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(84)

<400>   43
gtc gtc aac att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa     48
Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys
1               5                   10                  15

aat tta aat gaa tca ctc att gac ctt caa gaa ttg                     84
Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
            20                  25


<210>   44
<211>   28
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   44

Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys
1               5                   10                  15


Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu
            20                  25


<210>   45
<211>   105
<212>   DNA
<213>   SARS coronavirus Urbani


<220>
<221>   CDS
<222>   (1)..(105)

<400> 45

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att tca ggc att aac gct tct gtc gtc aac att caa aaa gaa att gac        48
Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp
1               5               10              15

cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att gac ctt        96
Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
            20              25              30

caa gaa ttg                                                            105
Gln Glu Leu
        35
```

<210>   46
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   46

```
Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp
1               5               10              15


Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
            20              25              30


Gln Glu Leu
        35
```

<210>   47
<211>   49
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   47

```
Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln
1               5               10              15


Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val
            20              25              30


Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser
        35              40              45


Ser
```

<210>   48
<211>   36
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   48

```
Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1               5               10              15


Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp
```

Leu Gln Glu Leu
        35

<210>   49
<211>   1255
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   49

Met Phe Ile Phe Leu Leu Phe Leu Thr Leu Thr Ser Gly Ser Asp Leu
1   5   10   15

Asp Arg Cys Thr Thr Phe Asp Asp Val Gln Ala Pro Asn Tyr Thr Gln
            20   25   30

His Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg
        35   40   45

Ser Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser
    50   55   60

Asn Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val
65   70   75   80

Ile Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn
            85   90   95

Val Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln
            100   105   110

Ser Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys
        115   120   125

Asn Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met
    130   135   140

Gly Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr
145   150   155   160

Phe Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser
            165   170   175

Gly Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly
            180   185   190

Phe Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp
        195   200   205

Leu Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu
    210   215   220

Gly Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro
225   230   235   240

Ala Gln Asp Ile Trp Gly Thr Ser Ala Ala Ala Tyr Phe Val Gly Tyr
                245   250   255

Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile
            260   265   270

Thr Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys
        275   280   285

Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn
    290   295   300

Phe Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr
305   310   315   320

Asn Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser
            325   330   335

Val Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr
            340   345   350

Ser Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly
    355   360   365

Val Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala
370   375   380

Asp Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly
385   390   395   400

Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe
            405   410   415

Met Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser
            420   425   430

Thr Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu
        435   440   445

Arg Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly
    450   455   460

Lys Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp
465   470   475   480

Tyr Gly Phe Tyr Thr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val
            485   490   495

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Val Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly
            500   505   510

Pro Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn
        515   520   525

Phe Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg
    530   535   540

Phe Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp
545   550   555   560

Ser Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys
                565   570   575

Ser Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser
            580   585   590

Glu Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr
        595   600   605

Ala Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr
    610   615   620

Gly Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu
625   630   635   640

His Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile
            645   650   655

Cys Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys
            660   665   670

Ser Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala
        675   680   685

Tyr Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile
    690   695   700

Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys
705   710   715   720

Asn Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu
            725   730   735

Gln Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile
        740   745   750

Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys
    755   760   765

Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe

Ser Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile
785   790   795   800

Glu Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met
                805   810   815

Lys Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile
            820   825   830

Cys Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr
            835   840   845

Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala
        850   855   860

Thr Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe
865   870   875   880

Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn
            885   890   895

Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala
            900   905   910

Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly
        915   920   925

Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu
    930   935   940

Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn
945   950   955   960

Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp
            965   970   975

Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln
        980   985   990

Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala
        995   1000   1005

Thr Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp
    1010   1015   1020

Phe Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala
    1025   1030   1035

Pro His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln
    1040   1045   1050

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Glu Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys
    1055   1060   1065

Ala Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser
    1070   1075   1080

Trp Phe Ile Thr Gln Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr
    1085   1090   1095

Thr Asp Asn Thr Phe Val Ser Gly Asn Cys Asp Val Val Ile Gly
    1100   1105   1110

Ile Ile Asn Asn Thr Val Tyr Asp Pro Leu Gln Pro Glu Leu Asp
    1115   1120   1125

Ser Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His Thr Ser
    1130   1135   1140

Pro Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val
    1145   1150   1155

Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys
    1160   1165   1170

Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu Gly Lys Tyr
    1175   1180   1185

Glu Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu Gly Phe Ile
    1190   1195   1200

Ala Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu Cys Cys
    1205   1210   1215

Met Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys Gly
    1220   1225   1230

Ser Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys
    1235   1240   1245

Gly Val Lys Leu His Tyr Thr
    1250   1255

<210>   50
<211>   35
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   50

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

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Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
            20   25   30

Leu Ser Ser
        35

<210>   51
<211>   35
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<400>   51

Ile Gln Ala Ala Leu Thr Lys Thr Ser Ala Ala Leu Gly Lys Leu Gln
1   5   10   15

Ala Ala Val Asn Arg Asn Ala Ala Ala Leu Asn Lys Leu Val Lys Ala
            20   25   30

Leu Ser Ser
        35

<210>   52
<211>   35
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<220>
<221>   MISC_FEATURE
<222>   (1)..(35)
<223>   X=aminoisobutyric acid

<400>   52

Ile Gln Glu Ser Leu Thr Xaa Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

Asp Val Val Asn Xaa Asn Ala Gln Ala Leu Asn Xaa Leu Val Lys Gln
            20   25   30

Leu Ser Ser
        35

<210>   53
<211>   35
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<220>
<221>   MISC_FEATURE

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<222>    (1)..(35)
<223>    X=dipropyl or dibutyl glycine

<400>    53

Ile Gln Glu Ser Leu Thr Xaa Thr Ser Thr Ala Leu Gly Lys Leu Gln
1               5               10                  15


Asp Val Val Asn Xaa Asn Ala Gln Ala Leu Asn Xaa Leu Val Lys Gln
                20              25              30


Leu Ser Ser
            35


<210>    54
<211>    35
<212>    PRT
<213>    Artificial

<220>
<223>    Synthetic peptide


<220>
<221>    MISC_FEATURE
<222>    (17)..(21)
<223>    i,i+4 lactam bridge

<400>    54

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1               5               10                  15


Glu Val Val Asn Lys Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
                20              25              30


Leu Ser Ser
            35


<210>    55
<211>    35
<212>    PRT
<213>    Artificial

<220>
<223>    Synthetic peptide


<220>
<221>    MISC_FEATURE
<222>    (7)..(11)
<223>    i, i+4 lactam bridge

<220>
<221>    MISC_FEATURE
<222>    (28)..(32)
<223>    i, i+4 lactam bridge

<400>    55

Ile Gln Glu Ser Leu Thr Glu Thr Ser Thr Lys Leu Gly Lys Leu Gln
1               5               10                  15
```

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Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Glu Leu Val Lys Lys
              20              25              30

Leu Ser Ser
        35


<210>  56
<211>  35
<212>  PRT
<213>  Artificial

<220>
<223>  Synthetic peptide


<220>
<221>  MISC_FEATURE
<222>  (14)..(21)
<223>  i, i+7 bridge

<400>  56

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Glu Leu Gln
1               5               10              15

Asp Val Val Asn Glu Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln
              20              25              30

Leu Ser Ser
        35


<210>  57
<211>  35
<212>  PRT
<213>  Artificial

<220>
<223>  Synthetic peptide

<400>  57

Ile Ile Glu Ser Leu Thr Thr Thr Ile Thr Ala Leu Gly Lys Leu Ile
1               5               10              15

Asp Val Leu Asn Gln Asn Ile Gln Ala Leu Asn Thr Leu Ile Lys Gln
              20              25              30

Leu Ser Ser
        35


<210>  58
<211>  35
<212>  PRT
<213>  SARS coronavirus Urbani

<400>  58

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp
1               5               10              15
```

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
            20   25   30

Gln Glu Leu
        35

<210> 59
<211> 35
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 59

Ile Ala Ala Ile Asn Lys Ser Val Ala Ala Ile Gln Lys Glu Ile Ala
1   5   10   15

Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Ala Ser Leu Ile Arg Leu
            20   25   30

Gln Ala Leu
        35

<210> 60
<211> 35
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (1)..(35)
<223> X=aminoisobutyric acid (Aib)

<400> 60

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp
1   5   10   15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu
            20   25   30

Gln Glu Leu
        35

<210> 61
<211> 35
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>

<221> MISC_FEATURE
<222> (1)..(35)
<223> X=dipropyl or dibutyl glycine

<400> 61

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp
1   5   10   15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu
            20   25   30

Gln Glu Leu
        35

<210> 62
<211> 35
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> i,i+4 lactam bridge

<400> 62

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Glu
1   5   10   15

Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
            20   25   30

Gln Glu Leu
        35

<210> 63
<211> 35
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (6)..(10)
<223> i,i+4 lactam bridge

<220>
<221> MISC_FEATURE
<222> (27)..(31)
<223> i,i+4 lactam bridge

<400> 63

Ile Ser Gly Ile Asn Glu Ser Val Val Lys Ile Gln Lys Glu Ile Asp
1   5   10   15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Lys Leu
          20   25   30

Gln Glu Leu
          35

<210>   64
<211>   35
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<220>
<221>   MISC_FEATURE
<222>   (13)..(20)
<223>   i,i+7 bridge

<400>   64

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Glu Glu Ile Asp
1   5   10   15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
          20   25   30

Gln Glu Leu
          35

<210>   65
<211>   35
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<400>   65

Ile Ser Gly Ile Asn Ala Ser Ile Val Asn Ile Gln Lys Glu Ile Asp
1   5   10   15

Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu
          20   25   30

Gln Glu Leu
          35

<210>   66
<211>   39
<212>   PRT
<213>   SARS coronavirus Urbani

<400>   66

Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln
1   5   10   15

Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser
                20   25   30

Leu Ile Asp Leu Gln Glu Leu
            35

<210> 67
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 67

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1   5   10   15

Asp Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp
                20   25   30

Leu Gln Glu Leu
            35

<210> 68
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 68

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1   5   10   15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ile Asp
                20   25   30

Leu Gln Glu Leu
            35

<210> 69
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 69

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1   5   10   15

Ala Arg Leu Asn Glu Val Ile Lys Ala Leu Asn Glu Ser Leu Ile Asp

Leu Gln Glu Leu
35

<210> 70
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 70

Asp Ile Ala Ala Ile Asn Ala Ser Val Ala Asn Ile Gln Lys Glu Ile
1   5   10   15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ala Ala
                20   25   30

Leu Gln Ala Leu
        35

<210> 71
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (17)..(21)
<223> relative to residues 1166 to 1170; lactam bridge

<400> 71

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1   5   10   15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp
                20   25   30

Leu Gln Glu Leu
        35

<210> 72
<211> 36
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (17)..(21)

<223> Salt bridge

<400> 72

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile
1   5   10   15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp
            20   25   30

Leu Gln Glu Leu
        35

<210>   73
<211>   36
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<400>   73

Asp Ile Glu Glu Ile Asn Lys Lys Val Glu Glu Ile Gln Lys Lys Ile
1   5   10   15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Glu Glu
            20   25   30

Leu Gln Lys Lys
        35

<210>   74
<211>   36
<212>   PRT
<213>   Artificial

<220>
<223>   Synthetic peptide

<220>
<221>   MISC_FEATURE
<222>   (1)..(36)
<223>   Introduction of salt bridges relating to mutations departing from
        SEQ ID NO:48 (HR-C4a extended; 1150-1185)

<400>   74

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Glu Ile Gln Lys Lys Ile
1   5   10   15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Ile Asp
            20   25   30

Leu Gln Glu Leu
        35

<210>   75
<211>   7

<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 75

Ile Gln Glu Ser Leu Thr Thr
1   5

<210> 76
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 76

Thr Ser Thr Ala Leu Gly Lys
1   5

<210> 77
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 77

Leu Gln Asp Val Val Asn Gln
1   5

<210> 78
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 78

Asn Ala Gln Ala Leu Asn Thr
1   5

<210> 79
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 79

Leu Val Lys Gln Leu Ser Ser
1   5

<210> 80

<211> 14
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 80

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys
1   5   10

<210> 81
<211> 14
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 81

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln
1   5   10

<210> 82
<211> 14
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 82

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr
1   5   10

<210> 83
<211> 14
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 83

Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser
1   5   10

<210> 84
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 84

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

Asp Val Val Asn Gln
          20

<210> 85
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 85

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala
1   5   10   15

Gln Ala Leu Asn Thr
          20

<210> 86
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 86

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val
1   5   10   15

Lys Gln Leu Ser Ser
          20

<210> 87
<211> 28
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 87

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln
1   5   10   15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr
          20   25

<210> 88
<211> 28
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 88

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala

Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser
                    20   25

<210> 89
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 89

Ile Ser Gly Ile Asn Ala Ser
1   5

<210> 90
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic peptide

<400> 90

Val Val Asn Ile Gln Lys Glu
1   5

<210> 91
<211> 7
<212> PRT
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Operating System: WinXP Pro, Patentin 3.3.
Applicant: Regents of the University of Colorado
Title: Compositions and Methods for Modification
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1. Certificate of Mailing by Express Mail - 1 page
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3. PCT Request in paper form - 4 pages
4. Fee Calculation page in paper form - 1 page
5. Specification excluding sequence listing (description - 63 pages; claims - 5 pages; abstract - 1 page) - 69 pages
6. 23 sheets of drawings
7. Sequence listing; paper – 46 pages
8. Sequence listing; Computer Readable Form/CRF – 1 diskette
9. Statement under 37 CFR 1.821-824 – 1 page
10. PCT-Safe file on diskette (3-05WOX.zip; 3-05WOX.log)
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